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IV

TOWN, COUNTRY, AND FOREIGN TRADE

Rumanian Industry

INDUSTRY has a Jekyll and Hyde role in the minds of many Rumanians. It is regarded as the potential savior of the economy through its ability to increase national productivity and to absorb surplus agricultural population. At the same time it is accused of exploiting the countryside and of gaining all the rewards. These two views are not necessarily mutually exclusive.

Before the First World War industry in the Old Kingdom was relatively undeveloped; the two most important industries were petroleum production and lumbering, both largely financed by foreign capital and both producing principally for export. Industrialization was naturally restricted by the scarcity of local capital and the lack of a trained labor force. Although the economy was predominantly agricultural, the Rumanian government, in 1887, inaugurated a policy of encouraging national industry by means of a high protectionist tariff, partly to avoid the complete destruction of household industries by foreign competition, partly for nationalist reasons.

The acquisition of new territories after the First World War—especially Transylvania with its mineral resources, metallurgical industry, and more highly developed economy—provided additional impulse to industrial expansion. Greater Rumania was moderately well endowed with raw materials: petroleum, fair lignite reserves, some iron, lead, zinc, and salt. Nevertheless, Rumania remained a predominantly agrarian country; in 1930 only 10 per cent of the active population was engaged in industry.

The growth of industry in the Old Kingdom in the first third of the twentieth century is shown by the following figures:[1]

	Number of industrial enterprises	*Personnel*	*Horsepower in enterprises*
1901	62,188	168,198	60,744
1930	58,892	279,897	623,442

The decrease in the number of establishments and the increase in horsepower show a concentration of industry in larger undertakings

1. Madgearu, *Evoluția economiei romînești*, p. 188.

241 Dry farming is practised to some extent, but is capable of
312 development in the districts of semi-steppe.

CO-OPERATION.

476 ALTHOUGH it is not by any means reduced to a science, as in Belgium and Denmark, for example, co-operation is practised by the Roumanian peasant farmer to an important extent. In Transylvania and Bessarabia, the system has for long been well established, owing to the initiative and encouragement of village priests and schoolmasters. For example, there are community herds of water buffaloes, which tend
477 to prevent deterioration of the breed. The forest industry is in the main run by co-operative societies which control the felling, local distribution and marketing of timber.

IN 1931 there were 5,200 popular co-operative banks, with over 1,150,000 members; 236 forest co-operative societies, with about 341,600 members; 1,600 consumption and supply co-operative societies, with 236,000 members; besides a number of village buying and leasing associations.

241 MUCH has been done, and efforts are continuing by propaganda and instruction, to encourage more up-to-date methods among the peasant farmers and there are a number of schools for primary instruction in agricultural method. Modern farm machinery is loaned by the Ministry of Agriculture to peasants for small fees, stud farms have been established to improve the breed of horses and cattle, and funds have been loaned to the peasant communities for the purchase of stud animals.

INDUSTRY.

● 135 FROM the point of view of power and raw materials for the development of industry, Roumania is also well endowed by nature. True, her supply of coal is negligible, the only deposit worth mention being that of the brown coal basin of Jiul at Lupeni in Oltenia, which is capable of producing about two million tons per annum. (The output in 1933 was in the neighbourhood of 1.4 million metric tons.) It contains much sulphur but is used to some extent in iron smelting. On the other hand, there are very rich stores of mineral oil. The oil-bearing rocks occur in abundance along the outer rim of the Carpathians in lower Miocene deposits which are

135 rich in salts. More accessible than these deposits are those of the sub-Carpathian hill country where upper Tertiary rocks are intensely folded in with salt-bearing Flysch deposits and have become impregnated with oil from the salt formations of the Flysch that has been forced up along lines of folding and fracture. Exploitation is mainly confined to the oil of these Pliocene rocks.

315 THE MAJOR oil-field follows the Carpathian arc from the neighbourhood of Piteşti through Târgovişte, Ploeşti in Muntenia and northward through Bacau in Moldavia to the Polish frontier (i.e. within the districts of Dambovița, Prahova, Buzau and Bacau in the Trotuş valley). There is also a small field in the Maramureş district.

THE Prahova district is the most important, producing 65 to 70 per cent of the whole, while Dambovița produces about 25 per cent. Pre-war development of oil industry was mainly in the hands of foreigners. By the 1929 Mining Law equality of Roumanian and foreign capital is provided. By an Act of 1924 the subsoil became the property of the State, which grants new leases for a period of thirty years. The State has acquired oil plot zones as permanent reserves. Oil getting is proceeding on up-to-date lines. Deeper strata are being tapped as the upper one becomes exhausted. Modern wells now reach down to about 1,800 metres. In Prahova and Dambovița State concessions are the most productive and active (e.g. Moveni and Gura-Ocnitsei). The total output of crude oil in 1933 was 7.37 million metric tons, 19.7 of the total oil products being used for home consumption.

NATURAL GAS is also tapped in the oil-fields for gasolene and for domestic lighting and heating. It is largely used in the chemical industry. Transylvania has no oil of importance, but some useful gas-fields. Crude oil is used for steam raising in the metallurgical industry and for generating electricity: it also figures as fuel in the tile and pottery industry. Oil- and petrol-driven machinery is installed in electric factories, in pottery and tile works, and particularly in the alimentary industries.

313 TIMBER, owing to the lack of good communications and to the abundance and lavish use of the forests, remains an important item in the production of power, particularly in

vested in it and the high contribution it is expected to make to the revenue of the State. The average price in lei of petroleum products per ton during the years 1928–31 were as follows, as reported by the Constantsa *Chamber of Commerce Bulletin*: 1928, at 4,080; 1929, at 3,800; 1930, at 2,600; 1931, at 1,031 lei. The following table, which gives quotations of the leading oil shares on the Bucarest stock market, is indicative of the depression which exists:

Average annual quotations

Share	1929	1930	*June* 1931	*June* 1932
Astra Romana ...	2391	1430	500	340
Steaua Romana ...	1234	571	230	135
Speranța	1210	639	380	100
Petrol Block ...	320	176	75	54
Concordia	1286	767	265	250
Creditul Minier ...	690	364	185	90
Redevența	321	182	65	30
I.R.D.P.	397	143	92	35

The other mineral resources of Rumania are considerable, especially in Transylvania, but no proper geological survey has ever been made, nor have any mines other than salt mines ever been properly exploited. The following figures give the quantities of minerals mined during 1930, the total value of the same being estimated at 10,437 million lei: Lignite, 2,071,057 tons; coal, 298,825 tons; copper, 6,655 tons and 169; iron, 92,517 tons; manganese, 33,528 tons; bauxite, 678 tons; pyrites, 24,264 tons; amber, 107 tons; salt, 304,777 tons; lead and antimony, 984 tons; lead glaze, 194 tons; gold, 2,672 kilograms, silver, 4.418 kilograms.

Lignite is found in extensive beds not only in Transylvania and the Banat but also in the old kingdom. It is mainly used for the railways. The better qualities of coal are found in south-western Transylvania and the Banat. Copper is principally mined at Tulcea, near the mouth of the Danube, and at Ciuc in Transylvania.

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[Oltenia]

Kingdom is Wallachia, which is formed by Oltenia and Muntenia.

OLTENIA. Oltenia is the western part of the principality of Wallachia. Its boundaries are, in the west and north the Carpathians, in the east the River Olt, and in the south the Danube. The province covers an area of about 9,640 square miles and has a population of about 1,900,000. The soil of the sub-Carpathian hills consists of sand and clay and gravel and is well watered by numerous rivulets. Here are some densely populated valleys, bordered by rich forests and grazing grounds. Farther south and extending to the Danube lies the fertile plain composed of the rich 'yellow earth'. Its character is similar to that of the lowlands of Muntenia, but it lies on a higher level and also has a higher rainfall.

The richest district of this fertile province is the *judet*[1] of Dolj in the south-western corner of Oltenia. From here, and the similarly fertile *judets* of Mehedinti and Romanati, also on the northern bank of the Danube, high-quality maize and wheat have been exported for many years. From the hilly country farther north fruit is the chief export. In the mountainous districts forestry provides the main occupation for the local inhabitants. There is much sheep-breeding, for the grassy slopes provide good grazing.

Apart from the Danube the two most important rivers of Oltenia are the Jiu and the Olt; the latter rises in Transylvania and enters Oltenia through the Red Tower Pass. Oltenia is not rich in mineral resources. There is, however, oil at Govora, west of

[1] Administrative unit.

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[Oltenia]

135 the Olt, copper near Baia de Arama and salt near Ocnele Mari, north of Govora. The peasant population, in spite of the great agricultural wealth of the province, is extremely poor. The people live in small villages near the rivers. The houses are more often than not almost subterranean mud-huts. Agricultural implements are very primitive. The wooden plough is still widely used.

175 Oltenia was the first district of Rumania which was colonized by the Romans. It formed the spearhead, and later the base, for the Roman penetration of Dacia. Among the most interesting relics of Roman times found in Oltenia are the ruins of a bridge built by Trajan and the fort just outside Turnu-Severin. After the Roman withdrawal Oltenia shared the fortunes of Muntenia,[1] and in 1859 joined the Principality of Rumania.

361 The capital and chief industrial and commercial town of Oltenia is Craiova with a population of about 60,000. It is also the road and rail junction linking Bucarest with Oltenia and the western provinces. Turnu-Severin on the Danube is the important port guarding the famous 'Iron Gates'. Here the current of the Danube, passing through a narrow gorge is too strong and the water too shallow for shipping to [503] make headway upstream. A deep channel has therefore been blasted in the rock of the river bed and vessels are towed up it by locomotives on the railway alongside. Before the Great War Turnu-Severin was the frontier town between Rumania and Austria-Hungary. It has still preserved the character of a picturesque oriental marketing centre.

[1] Except that in 1718, after the Austrian occupation of Belgrade, Oltenia was temporarily under Austrian rule.

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[Oltenia.]

[Muntenia.]

The Danubian ports of Calafat and Corabia handle wheat exports and also have some valuable industries.

MUNTENIA. To the east of the River Olt extends Muntenia, the other province of Wallachia. It covers an area of about 20,600 square miles and has a population of about 4,500,000. The southern and eastern boundaries of the province are formed by the Danube, the northern frontier by the Carpathians. The land surface and climate of Muntenia are similar to those of Oltenia, but the hilly region south of the Carpathians is narrower. The fertile steppes, Baragan, Burnas, Gavan and Burdeas, are situated on the northern banks of the Danube which floods the adjoining districts and forms many lakes and marshes. The highest peaks of the Carpathians in Muntenia are the Negoi and the Moldovan, both over 7,500 ft. The most important of the many rivers descending from the high mountains are the Dambovita, Jalomita, Arges and Buzau, all of which eventually flow into the Danube. The endless maize and wheat fields of Muntenia are covered in summer with heavy crops and on the steppes great flocks of sheep find their food. In spite of very dry summers and icy winters like those of Russia this region is one of the richest of Rumania and the whole of Europe.

Muntenia differs from all Rumanian provinces in that, in addition to stock breeding, the raising of high-quality crops, fishery and forestry, it possesses a source of wealth which is not found in such abundance in any other part of Europe, the oil fields of Campina and Ploesti. There the hilly, wooded countryside suddenly changes into a modern in-

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[The Dobrudja]

part of the Dobrudja. The delta of the Danube is formed by the three arms Chilia, Sulina and St George. It includes an area of about 1,000 square miles, in which water and land, marshes, lakes and islands feed an almost tropical vegetation. The chief communications through the delta are provided by the Sulina canal and by causeways.

The steppes of the Southern Dobrudja yield good crops of wheat and maize, and the pastures maintain great herds of sheep. Mineral resources are confined to some unworked coal deposits, valuable copper near Altantepe, and sulphur.

The Dobrudja is about 9,300 square miles in all: of this some 2,960 square miles were returned to Bulgaria in 1940. The population of the province as a whole is about 850,000. Its main value to the contesting States lies in the Black Sea stretch of coast. The port of Constanza, the greatest and most important on the western shores of the Black Sea, has modern harbour works built at the beginning of this century and covering an area of 60 hectares. It was through Constanza that Rumanian exports used to pass to France and Great Britain. The docks of Constanza are about 30 ft. deep and can, therefore, be used by large, sea-going ships. The harbour facilities include storage buildings for wheat and oil-tanks with a capacity for over 200,000 cubic metres of fuel, which are fed by the pipe-lines coming from Ploesti. Oil can moreover be pumped straight from the pipe-lines simultaneously into four tankers. Another great advantage is that the port is completely ice-free all the winter. Constanza is the administrative centre of the Dobrudja and also a well-known seaside resort. Rail communications

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[Moldavia]

and good pasture. The Sereth, which waters this region and runs parallel to the Pruth, flows into the Danube below Galati.

On the eastern slopes of the Carpathians there are large deposits of oil which have not yet been fully exploited. In the *comitat* Bacau, also in the mountain region of Moldavia, there are some valuable coal and salt mines. The salt mines of Targu-Ocna are the most important in the whole of Rumania.

The majority of the people of Moldavia are employed on the land. They grow wheat, maize and sugar-beet and tend the vines. Recently, successful experiments have been made with the growing of industrial crops. Timber felling provides another source of income, especially at Targu-Neamt, Piatra-Neamt and Focsani. There are important refineries at Moinesti and Solont, sugar factories at Roman and Ripiceni, and large textile works at Buhusi.

The capital and economic centre of Moldavia is the town of Jasi, on the western bank of the Pruth. Its population numbers about 80,000, more than half of them Jews. Jasi, lying on a number of vine-growing hills overlooking the valley of the Pruth, is an old commercial centre, which used to be visited in the middle ages by Genoese, Venetian and Greek merchants. In Jasi, with its wide streets flanked by long rows of one-storied houses, there is the oldest Rumanian University, founded by John Cuza, a famous library containing over 160,000 books, and many other cultural institutions. Jasi has a number of iron and steel works, several clothing factories and is the chief marketing centre for cattle and wine in Moldavia.

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[The Banat]

The north-western part of the province is 133
the continuation of the Hungarian plain and is very [135]
fertile. To the east and south there are high mountains with rich forests and iron and coal deposits. The mountains of the Banat are forced by the Danube in the area between Bazias and Orsova, cutting a deep narrow valley which, in the Kazan Pass, is only about a hundred yards wide. This is where the Roman emperor Trajan built the second of his bridges over the Lower Danube. This is also one of the most picturesque regions of the Banat and the whole of Rumania,

The Banat has been a strategic and economic 175
outpost of various States and empires. Throughout 635
the times of known history this province was a favourite region for colonization. Romans, Turks, Hungarians and Austrians sought to strengthen the frontiers of their dominions by settling the Banat with peoples on whose loyalty, military and economic abilities they could rely in case of war. In consequence peoples of all races were transplanted to and took root in the Banat. In Roman times the province was fortified in order to protect the settlers who were brought here from all over the empire against the Dacians of Transylvania. During the many Turkish wars the Banat was an important defensive position upon which the Hungarians based their strategy. For over a century and a half, from 1552 to 1718, the Banat was under Turkish rule and went through a period of decay.

Under the Austrian military administration, which lasted up to 1779, the Banat experienced great prosperity. German settlers from the Rhineland and French-speaking peasants from Lorraine were brought to the Banat by the Empress Maria

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[The Crisana]

in the west and Czechoslovakia in the north. The inhabitants of the Crisana are Rumanians, Hungarians, Jews, Germans and some Slavs. Taken as a whole the province contains a slight Rumanian majority, but there is in the immediate frontier region a fairly homogeneous Hungarian population, which forms a local majority.

The western part of the Crisana has the same features as the lowlands of Hungary. The types of agriculture also closely resemble those of the rest of the country on both banks of the Tisza[H] (Theiss[G]). There are wide, flat fields of maize and wheat interspersed with pastures, grazed by horses and longhorn cattle. To the east the country rises and forms a chain of hills which produce good fruit and wine. Beyond are the mountains of Bihor (Bihar[H]) which form the western wall of Transylvania. These mountains are rich in coal, gold, copper, bauxite, asphalt and marble. Consequently this region maintains numerous industrial enterprises. Apart from its mineral resources and good wheat and maize the Crisana is also well known for its horses, cattle, pigs and sheep.

The capital of the Crisana is Oradea-Mare (Nagyvarad[H], Grosswardein[G]) in the valley of the Cris (Körös[H], Kreisch[G]). Its population of about 95,000 consists of Hungarians, Rumanians, Jews, Germans and others. Oradea is the junction for five railway lines and commands all the main communications leading from the Hungarian plain to Transylvania. The town is also the seat of many industries and the chief market for the agricultural produce of the province. Arad, on the northern bank of the Mures (Maros[H]), is inhabited by 65,000 people,

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[The Crisana]
[Maramures]

mostly Hungarians, and occupies a similarly important position. Here there are numerous factories, including mills, railway shops and locomotive works and textile factories. Satu-Mare (Szatmar[H]), with 60,000 inhabitants, is the largest town in the Northern Crisana.

After the Great War the Crisana, which was first occupied by the Hungarians in the tenth century and subsequently colonized by them, was awarded to Rumania. Under the Vienna Award of 1940 part of the Crisana was returned to Hungary, with a considerable Rumanian population.

By the same decision the province of Maramures (Marmaros[H]) (about 1,350 square miles), inhabited by over 150,000 people, acquired by Rumania in 1918, was returned to Hungary. Geographically Maramures is a continuation of the Czechoslovak province of Ruthenia. It is enclosed on all sides by chains of mountains covered with thick forests whose great density is rare even in the Carpathians, which are famous for their wealth of trees. It is not easily accessible except by a solitary railway line which comes from Transylvania and leads to Ruthenia. The small population consists of Ruthenians, Rumanians, Jews, Slovaks and Hungarians and is typical of the medley of races to be found in quite small areas of this part of Europe. Owing to the mountainous nature of the country there is little agriculture. The chief occupation of the inhabitants is the felling of trees. The most valuable asset of the province is its mineral wealth. There is oil, gold, copper, salt and coal. The capital and only major town of Maramures is Sighet (Marmaros-Sziget[H]) with a large Jewish population. Sighet, a town of

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[Transylvania]

Scaune (Haromszek[H]) which also possesses numerous industrial enterprises. Most of the rivers of Transylvania rise in the Eastern Carpathians and flow to the west and south. The Mures, flowing from east to west winds its way between the Carpathians and the 'Western Mountains,' near Alba Julia (Gyulafehervar[H], Karlsburg[G]) and descends into the lowlands farther west. The Somes (Szamos[H]) reaches the plains north-west of the Transylvanian highland and eventually flows into the Tisza. Communications with Muntenia and Oltenia go over the mountain passes of Predeal, Bran and the 'Red Tower', with Moldavia over those of Buzau, Ghimes and Bicaz, and with the Bukovina over the Rodna Pass.

The climate of Transylvania is not as favourable for the raising of crops as that of Muntenia and the Banat. In the valleys, however, maize, wheat and rye are grown with some success. Stock-breeding is more important than agriculture. But Transylvania is very rich in mineral resources. Apart from coal, gold, copper, salt, bauxite and iron Transylvania possesses the greatest reserves of natural gas in the whole of Europe. The chemically pure methane which is used by many factories for power, as well as for cooking and lighting by many householders, could supply the whole of Transylvania for over a hundred years and make the consumption of coal unnecessary.

The capital of Transylvania is Cluj (Kolozsvar[H], Klausenburg[G]), with a population of over 105,000, consisting of Hungarians, Germans, Rumanians and Jews. The town is an important rail and road junction and the cultural centre of all the three

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[The Bukovina]

rule. It was occupied by the Russians in 1769. In 1774 the province was given to Austria, under which it remained until 1918. On 23 October the Austrian governor handed over the Bukovina to the Ukrainian inhabitants of the province; but four days later an assembly of Rumanian Bukovinians declared for the union of the province with Rumania and asked the Rumanian government for military assistance. This was forthcoming on 11 November and added to Rumania a territory of about 4,100 square miles with a population of about 870,000 (1930). Of these over 38% were Ukrainians, 34% Rumanians and 21% Germans and German-speaking Jews. The Rumanian administration began by a vigorous policy of Rumanization. The Ukrainians, who under Austrian rule had been well treated, and the Jews, were the chief sufferers, but the Germans, too, were ousted from many of their positions.[1]

More than half of the Bukovina is covered with dense forests of beech;[2] one-fifth consists of pastures; less than a third is arable land. The province borders in the west on the Carpathians, in the south on Moldavia, in the east on Moldavia and Bessarabia and in the north on Poland. The western part of the Bukovina is formed by the slopes of the Carpathians, where manganese and iron ore are found, especially in the region of Jacobeni. To the east stretches the hilly country, covered with pastures, on which good livestock is raised, and fields of maize, wheat and tobacco. Mineral resources are confined to some, Small deposits of coal, gold and lead, but the industry of the province is well developed.

[1] The German University of Czernowitz was completely Rumanized soon after the military occupation.

[2] The German name of the province means 'Land of the Beeches'.

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MINERAL RESOURCES. The great and varied wealth of the subsoil of Greater Rumania has been exploited only to a small degree. Apart from gold and silver, which are found in rivers and mined in Transylvania, there are iron-ore deposits estimated at about 30,000,000 tons. The average yearly production, however, amounted to only about 100,000 tons. The important alloy, manganese, found in various parts of the country, copper, zinc, chromium and bauxite all contribute to the mineral wealth of Rumania.

Through the acquisition of the New Territories the coal deposits of Greater Rumania were greatly augmented. The total coal reserves, of which the most important are situated in the western provinces and in Transylvania, were estimated at 722,000,000 tons. The average yearly production, of which two-thirds were brown coal, amounted to between 2,000,000 and 3,000,000 tons. A source of power which is not found in any other part of Europe, and which could transform and sustain Rumanian industry for many years, is the great subterranean natural gas reservoir in Transylvania which contains chemically pure methane.

Another source of energy of which only a small fraction has yet been exploited is Rumania's potential water power, estimated at 1,500,000 horsepower, which equals the energy of all the coal, oil and natural gas resources of Rumania taken together.

OIL. The centre of the Rumanian oilfields is the region of Campina and Ploesti which also has the biggest refineries for the production of petrol and aviation spirit. Oil is also found in Oltenia, Moldavia and Maramures. Crude oil was already known

315 pipeline has been completed from a secondary source of supply at Manești to convey this gas to Bucarést to supply both household and industrial requirements.

●135 Iron-ore deposits are small, so that the heavy industries are very largely dependent on imports. A variety of other mineral resources, which are believed to exist in greater abundance than has so far been established, have not yet been fully surveyed.

433 Rumania has a poorly-developed industry, which lags far behind that of western European countries such as Czechoslovakia, though is ahead of all the other south-east European countries, except Hungary. Financially she is a poor country, with very limited capital resources, which has proved a severe hindrance to industrial development and has laid her open to the investment of foreign capital, which has been attracted particularly by the rich mineral oil and forest resources. Skilled labour, also a vital factor in the process of industrialisation, has been lacking, so that the use of foreign technicians has been essential. Other raw-material resources, though adequate to allow the development of a sound and varied industry, are not sufficiently extensive to encourage a very rapid development independent of imported raw materials.

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Industrialisation in Rumania did not start until about 1890, and the period of greatest expansion was between 1929 and 1938. The consumption industries were the first to be developed, and of these food industries are the chief, the raw materials being grown on the spot. The growth of such industries as paper, cardboard, printing, soap, chemicals and furniture, etc., followed. The location of industry in the earlier stages was governed not by such factors as the existence of cheap labour, but was built up in those areas richest in raw materials.

MAIN INDUSTRIAL REGIONS

[311] The main industrial region is in the Prahova valley, where the oilfields are to be found, followed by the Reșița district, where the existence of iron ore, coal, manganese, etc., led to the development of metallurgical and engineering facilities, as well as of such auxiliary industries as coal and wood distilleries. Gold, silver, lead, zinc and copper deposits in the Baia Mare region formed the basis for the erection of both metal and chemical factories. The presence of methane gas, salt, gold, silver and stone quarries in and around Turda determined the location of factories for production of cement, limestone, bricks, tiles, porcelain, glass, sulphuric acid, etc. In the rich forest districts of Ferdinand, Nadrag and Hunedoara, where iron ore deposits are also to be found, blast furnaces and metallurgical industries have been established. The textile industry is mainly established in Cisnădia, Piatra Neamț, Bacău and Buhusi. Apart from the regions mentioned, industry is centred in the principal towns—Bucarest, Timișoara, Brașov, Sf. Gheorghe, Arad, Galați, Brăila, Cernăuți, Cluj and Iași.

The following table gives an idea of the relative importance of the various industries, showing the amount of capital invested and value of production in each of the main groups, and also the number of factories and of personnel employed :—

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TERRITORIAL LOSSES

In 1940 Rumania suffered serious loss of territory. First in August, Bessarabia and the Northern Bucovina were occupied by the Russians, then a few weeks later Northern Transylvania was given to Hungary by the Vienna Award, following which the Southern Dobruja was ceded to Bulgaria by the Treaty of Craiova. However, in 1941, Bessarabia and Northern Bucovina were regained so that the loss of these territories was of only temporary significance.

[131]
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Territory	*Area sq. km.*	*Population in millions*	*Date of Loss*
Bessarabia and Northern Bucovina	50,000	3.3	*August*, 1940
Northern Transylvania	43,700	2.75	*Sept.*, 1940
Southern Dobruja	7,700	0.38	*Sept.*, 1940

The temporary loss of Bessarabia and Northern Bucovina had serious repercussions on the economic situation of the country, which were of wider effect than might be supposed from the limited time of the annexation, because of the loss of the harvests of both 1940 and 1941, the "scorched earth" policy of the Russians and the dislocation of the transport system caused by the necessary re-conversion to standard European gauge from the Russian gauge.

The cession of Northern Transylvania, apart from the mere physical loss of territory and population caused a severe disruption of the economic system on account of the valuable raw materials involved, and the loss of industry which had been built up on the basis of these raw materials. The capital invested in industry in this area represented some 13 per cent. of total investments in industry in the whole country. The main features were the mineral resources of the Baia Mare district, containing lead, zinc, gold, silver and small quantities of copper, with lead-refining plants attached. In this area deposits of pyrites were fairly considerable and supplied the bulk

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728 of requirements for sulphuric-acid production. Of lesser importance were the salt and coal deposits. [135]

[313] The forest resources of Northern Transylvania are estimated to have accounted for as much as 25 per cent. of pre-war timber production. Apart from timber the food and leather industries [311] appear to have been the most developed. This area was principally made up of forests and pastures; the arable land provided no surplus [333] after local needs had been covered. Of livestock losses the most outstanding feature was nearly 2 million sheep.

[496] The railway system, and particularly the railway administration, was severely handicapped by the change of frontiers, which in places cut one part of Rumania off from the other.

Caliacra and Durostor, the two ceded Dobrujan provinces, are mainly agricultural, and though producing a small surplus, contributed little to Rumania's total agricultural output. Of more significance is the cotton-growing area. There are no known mineral deposits, and industry in this area is on a very small scale, relying mainly on handicrafts.

TRANSNISTRIA

727 Transnistria is the name which has been given to the territory lying between the Dniester and the Bug, which was given to Rumania to administer in 1941 subsequent to its capture from the U.S.S.R. by Rumanian and German troops. Transnistria is part of the Southern Ukraine and is mainly agricultural, while such industry as existed has been of no use to the Rumanians on account of the heavy destruction carried out by the Russians. It is probably true to say that this territory has been more of a financial liability than an asset to Rumania on account of the heavy expenditure entailed in repairs, particularly of railways and bridges. Some little advantage has, however, been gained from the harvest of 1942–3.

315 Two additional pipelines, each of 10 in. diameter, constructed largely of material removed from France, have been built between Ploesti and Giurgiu, each with a capacity of over three quarters of a million tons a year.

New refinery and drilling equipment, which prior to the war Rumania used to import largely from the United States, has now to be obtained from Germany. The financial terms on which this equipment is obtained are unfavourable to Rumania and deliveries are slow.

2. German Influence on the Oil Industry

315 German pressure upon Rumania to obtain
648 greater supplies of oil has been largely exerted by
413 means of commercial penetration into the oil industry, but there is evidence that Nazi diplomats have laid particular emphasis on the German need for oil, suggesting that larger supplies might be available if production was increased and internal consumption reduced.

German penetration into the Rumanian oil industry began to take aggressive form some time before the war. The Germans first acquired a minority holding in Creditul Minier, then in 1939 secured control of Petrol-Block. The collapse of France afforded further opportunities of encroachment, and through Kontinental Oel A.G. control of Concordia and Colombia was secured; similarly, by assuming arbitrary control of Dutch interests the Germans now direct the policy of Astra-Română, the largest of the producing companies. In all, German influence through financial control now extends to about 50 per cent. of the industry, and 60 per cent. of productive capacity, quite apart from the pressure the Germans can exert through control of transport out of the country. The actual effect of this influence is not easily assessed, modified as it is by Rumania's nationalistic oil legislation—particular privileges are reserved under the new mining laws for companies which can show that 75 per cent. of their capital is in Rumanian hands—and the instinctive aversion of the Government to outside control. It is, however, sufficient to ensure that German requirements have a definite priority, and nationalistic as some parts of the new mining law may be, any measures serving to increase immediate production, under whatever pretext they are taken, are beneficial to Germany's interests. Tables I and II on pages 15 and 16 show the approximate strength of the oil groups by nationalities in 1940 and 1942. 1

3. War-time Restrictions

315 Nearly 70 per cent. of Rumanian petroleum
●135 consumption is represented by fuel oil, and a theoretical saving could be brought about by the use of coal and natural gas. Coal resources, however, are limited, and in any event a greatly increased use of coal is restricted also by the speed at which locomotives and power plants can be converted from oil to coal burning.

315 In November 1942 a petrol-rationing scheme
434 was introduced, and although the allowances were on a liberal scale, the regulations do not appear to have been observed and, the scheme as a whole was ineffective. In March 1943 this was admitted by the announcement that the scheme would be more strictly enforced and new ration cards issued. Simultaneously regulations were published concerning the use of taxis, and a time limit of September 1943 was set for the conversion of boiler plant.

In general, attempts to restrict consumption either by the announcement of new regulations

1 [Cf. cat. 315, pp. 15c and 16a-Analyst]

[14b]

I. COAL

A. Consumption, Imports, Deposits

372 375 Coal has not played such a large part in Rumanian economy as it has in that of most European countries because of the abundant mineral oil and timber resources which have been used extensively for fuel, both in industry and for household purposes. The following table shows the percentage consumption of the different types of fuel (average 1937-39) :—

	%
Firewood	28·7
Oil and oil products	20·1
Coal	25·9
Methane and other gases	17·2
Water power	2·1

The railways accounted for 60 per cent. of total coal consumption which was of the order of 2 million tons, the balance being divided between industry, household consumption and bunkers.

●135 Before the war coal reserves, which are predominantly brown coal, were estimated at 2·7 milliard tons brown coal (including lignite), and 48 million tons of hard coal. The more important deposits are located in southern and western Transylvania, while a few of lesser importance are in the northern area which was ceded to Hungary.

316 429 In spite of the limited industrial development of the country and extensive use of oil, coal production is hardly sufficient for current needs, and it has been necessary to import both coal and coke to fill the deficiency.

Pre-war coal imports in metric tons were as follows :—

	Metric Tons
1935	21,000
1936	23,000
1937	28,000

316 439 It is difficult to estimate coal imports since the war, but available evidence suggests that they are in the neighbourhood of 75,000 tons annually or three times as high as the pre-war figure. Owing to the exigencies of war, railway traffic has increased enormously, and the switch-over from oil-burning to coal for industrial and central-heating plants all add to the demands for coal.

135 **Coal Deposits**

The principal coal-producing district is around Petroşani, while the main deposits are as follows:—

Type	*Location*	*Calorific Value*
Anthracite ..	Schela in Gorj district	7,300
Hardcoal* ..	Reşita and Anina-Steierdorf	6/7,000
Brown coal and lignite	Jiu valley	6,500
	Comăneşti basin ..	5,200/5,600
	Ialomiţa valley ..	5,000
	Dâmboviţa valley ..	5,000
	Bacău district ..	5,000

* Some is suitable for coking.

B. Tables

1. Coal Production

316 During recent years coal production has been increased in spite of a slight setback in 1940, when with the transfer of N. Transylvania to Hungary a small proportion of the working mines were lost. Further efforts are being made to increase production so that fuel-oil consumption may be reduced. To this end the conversion of central-heating installations, industrial oil-burning plant and oil-fired locomotives to coal burning has been ordered.

A. INTRODUCTION

135 By comparison with Greece or Yugoslavia Rumania has but poor deposits of minerals with the exception of gold, as a producer of which, before the loss of Transylvania she ranked second in Europe to Sweden.

316 Iron-ore output is inadequate to meet the requirements of the steel industry. Bauxite output is on a very small scale, though steps are being taken to increase it and to create an aluminium industry. Production of lead and zinc, though sufficient pre-war to cover requirements, was centred in territory now ceded to Hungary, so that the country has become dependent on imports. Silver and copper production, the latter never other than on a small scale, have also suffered through territorial losses. Attempts have been made during the last few years to develop output of chrome and manganese—manganese for production of ferro-manganese for the iron and steel industry, and chrome, deposits of which appear not to have been worked before 1941, for export to Italy.

135 Deposits of mica and molybdenum have both been recently discovered in small quantities in the Mehedinți district, and the Germans are particularly interested in production of the former.

B. IRON AND STEEL

327 Full use of the Rumanian iron and steel industry is severely hampered by inadequate supplies of metallurgical coke and of iron ore, both of which have to be imported. Shortage of the former particularly has affected the industry since the outbreak of war, because, due to an insufficient supply of metallurgical coke in German Europe as a whole, Rumania has been unable to import the requisite quantities to maintain output of her blast furnaces. Rumanian plants, however, are new and the steelworks are all open hearth or electric, which means that they are able to produce the qualities most useful for armaments.

1. Iron Ore

316 Shortage of iron ore is the fundamental weakness of the Rumanian iron and steel industry. Though various other concessions have been granted, but not yet in any way developed, only three mines have been regularly exploited, as follows —

(a) The Ghelari deposits of limonite (47 per cent. to 54 per cent. iron) owned by the State and exploited by the Hunedoara Works.

(b) The Teliuc deposits of limonite (45 per cent. to 52 per cent. iron) and of siderite (28 to 35 per cent. iron), owned and exploited by Titan Nadrag Calan.

(c) The almost exhausted Ocna de Fier deposits of poor quality limonite owned by Reșița.

316 439 Rumania has always had to import ore, chiefly from Yugoslavia, and recently from the Russian mines of Krivoi Rog as well. The following table shows Rumanian output and imports of iron ore:

Year	*Output*	*Imports*
	000 tons	
1936	107	80
1937	147	90
1938	137	114
1939	143	90
1940	151	52
1941	106	n.a.

CHAPTER IV

327 compared with the following annual pre-war figures:

Year	'000 tons
1936	225
1937	241
1938	326
1939	385

4. Iron and Steel Consumption

The limited native iron and steel production which was never sufficient to keep the consuming industries fully supplied, became an increasing impediment with the rapid development of these industries during the last few years. Iron and steel products had therefore to be imported at [439] the rate of 2,300,000 tons a year. The outbreak of war in Europe, and consequent restriction of supplies meant a falling off of imports, so that an acute shortage developed. During 1942 however, the situation improved somewhat in that Germany was reported to have sent a total of 130,000 tons of iron and steel products to Rumania.

5. German Penetration

327 A small degree of penetration into the Ru-
439 manian iron and steel industry has been achieved
473 by the Hermann Göring Werke, which, after the partition of Czechoslovakia, acquired Czech interests in Reşiţa amounting to 6 per cent., which were later increased to 20 per cent.

In 1941 a company with 50 per cent. German and the remainder Rumanian capital, was formed to take over the management of Reşiţa and its associated companies. The Malaxa Works later also came under the organisation of this company.

C. LEAD AND ZINC

1. General

328 In pre-war years Rumania was practically
439 self-sufficient in lead but not in zinc, since she possessed no zinc-smelting facilities. Her production of zinc concentrates was exported, mainly to Poland, part of the metal content being reimported after smelting. Belgium and Poland were her chief suppliers of metallic zinc.

2. Mines and Plant

316 The mining of lead and zinc constituted only a small industry in Rumania. Part of the production, almost 50 per cent. in the case of lead, was obtained incidentally to the working of gold and silver ores. The principal producers were [659] the State-owned mines Baia Sprie, Capnic, Văratec, Valea Roşie, Dealul Crucii, and the Herja mine owned by Phœnix S.A., all are situated in the Baia Mare district in North Transylvania. The Herja ores averaged approximately 8 per cent. lead and 14 per cent. zinc, whilst ores from the other mines averaged only 4 per cent. lead and 10 per cent. zinc.

●135 There are other deposits in the Transylvanian Erzgebirge, where galena and blende are associated with gold occurrences, in the Hunedoara, Banat, and Severin districts, and at Cârlibaba in the Bucovina.

328 Rumania possessed two lead smelters for the treatment of her production of concentrates, the Phœnix plant at Lucaci, with a capacity for about 5,000 tons of crude lead and 3,000 tons of refined lead, and a plant at Feriza belonging to Uzinele Metallurgice din Firiza de Jos. There

[22a]

328 was no zinc-smelting capacity until 1934 when the Société Générale Concern (Société Nationale d'Exploitations Minières et Industriales S.A.R.) established a plant at Copşa Mica with a capacity for 6000 tons of crude zinc annually. The smelter has thirty retorts fired by natural gas; the concentrates are first roasted at the Phœnix works.

3. Pre-War Production and Trade

Ore production increased over the years 1934–1938; statistics available are conflicting, but it is certain that 1938 production in terms of lead content was not less than 7000 tons. Smelter production also increased from 4000 tons to about 7000 tons and averaged about 5000 tons over the period. Exports and imports of lead were very small.

Ore production in terms of zinc content varied between approximately 4000 tons and 8000 tons. The concentrates were all exported, chiefly to Poland. Metallic zinc was imported almost entirely from Belgium and Poland.

The small output of lead and zinc was of little importance other than to Rumania herself.

4. War-time Development

[728] [439] As practically the whole of the Rumanian lead-zinc industry passed to Hungary when she acquired the Baia Mare district under the Vienna Award, Rumania became largely dependent on imports for the satisfaction of her lead and zinc requirements. However, she retained the Transylvanian Erzgebirge and other areas containing lead-zinc deposits, some of which she is now endeavouring to exploit. For instance, it was reported in December 1942 that deposits in the Banat, near Agadici, and in the Hunedoara district, were being developed. The Copşa Mica zinc smelter has remained in Rumanian hands.

D. MICA

316 135 The Germans are taking considerable interest in the mica deposits discovered in the Mehedinti district, though little is believed to be of high quality. The present annual rate of production is estimated to be about 150 tons.

E. BAUXITE

135 Rumania possesses reserves of bauxite situated in the Bihor Massif and estimated by German experts in 1941 at some 40 million tons. The main deposits are located in the Pocuiu, Vaşcău, Rojiştea and Iad Valleys, and in the Galbina Valley south-east of Bor. Small deposits exist around Remetea and Beiuş, and in the district around Petroasa and near Turda.

31 Despite the size of her ore reserves, Rumania's production of bauxite has never been important, largely because of its unsuitability for the Bayer process, which is mostly operated in European alumina plants. Pre-war output never exceeded 10 000 tons annually, and was mostly consumed at home in the manufacture of cement and refractory bricks.

Mining operations were carried on before the war by three companies:

Baia Mare S.A.R., a subsidiary of the Swiss Aluminium Industrie A.G. Chippis, which owned mines at Dobrești and produced small quantities of bauxite for the Rumanian cement industry.

[22 E]

316 (b) *Alumina S.A.R.*, a subsidiary of the German-controlled Bauxit-Trust A.G. of Zurich, which mined bauxite principally at Bratca in the Jad valley, and also owned concessions at Remetea and Pietroasa.

(c) *Aur S.A.R.*, a subsidiary of the Rumanian Mica Group, owning bauxite properties in the Sohodol region near the railway from Abrud to Turda. It supplied bauxite for the manufacture of cement and at the outbreak of war had reserved stocks for a projected alumina and aluminium plant.

The Dobreşti mines of the Bauxita S.A.R., which are within the present Rumanian frontiers, are producing at the rate of 10,000 tons annually, most of which is delivered to Germany.

F. ALUMINIUM

328 Rumania possessed no aluminium industry before the war although from time to time plans for an alumina-aluminium works were discussed. A few thousand tons of aluminium, [439] mostly in the form of semi-manufactured or finished products, were imported annually, Germany being the principal source of supply.

, Aur S.A.R. have been experimenting in the production of alumina in a small pilot plant near Dicio Sân Martin, using the Seailles process which is claimed to be successful in producing alumina from low-grade bauxites of the type mostly found in Rumania.

This company is planning an aluminium reduction works of 20,000 tons capacity with an alumina plant of 60,000 tons. I.G. Farbenindustrie and the Mica group are interested, and the intention is to supply 20,000 tons of alumina annually to Germany. Up to June 1943 these projects had apparently not progressed beyond the experimental stage.

Small tonnages of aluminium, mostly in the form of semi-manufactures, are being imported from Germany, principally for the Rumanian aircraft industry.

G. CHROME

316 Rumania has reserve of chrome ore estimated at 2 million tons, located at Ogradina and Plavişeviţa [135] on the Danube near Orşova. These deposits were not worked before 1941, and the output for 1942 is estimated at 5,000 tons. The ore is low grade, the highest chrome content being 40 per cent Cr_2O_3. Germany is believed to be receiving the greater part of present output.

H. MANGANESE

The pre-war annual output of manganese averaged 40,000 tons (40 per cent. Mn.), and the probable maximum output that could be obtained is 60,000 tons. The ore is located in the Eastern and Southern Carpathians with reserves estimated at 10 million tons, while the principal mines are near Jacobeni. About 30/35,000 tons of manganese ore is available for export, and is now mainly supplied to Italy and Germany, the remainder being used locally in the making of ferro-manganese. The Nitrogen company at Dicio sân Martin are reported to have extended their plant to produce ferro-manganese for supply to Reşiţa iron and steel-works, and to Titan Nadrag Calan.

[23a]

I. COPPER

316 Apart from a few gold mines producing copper as a by-
1/35 product in the mining of gold ores, there is no
copper-mining industry in Rumania. There are,
however, two deposits which have possibilities of
future production. They are as follows:—

(a) At Altan Tepe in the Dobruja, 12 miles south of Tulcea, near the Black Sea coast, is a deposit which is being developed by Credit Minier S.A.R. There are three areas totalling about 5,000 acres and reserves of 400,000 tons of ore averaging 1½ to 3 per cent. copper.

In 1940 development was proceeding slowly, and it did not appear that any production would take place for at least two years.

(b) At Zam, which is about 10 miles from Brad in western Transylvania, there is another deposit. The veins vary from a few inches to a metre in width, and the grade of the ores is from a half to 3 per cent. copper. These deposits have been worked on a small scale in the past, but no work is in progress at the present time.

Production of copper ore in Rumania mainly from operations at various gold mines is reported to have been 12,420 tons in 1938 and 25,168 tons in 1939.

J. GOLD

The most important area for gold mining is in the Apuseni mountain district in Central Transylvania. The principal gold deposits lie within an area bounded by Baia De Arieș, Zlatna, Sacaramb and Tebea. The chief mining centre is Brad, the nearby-mines of Musari, Brodisor and Valea Morii providing most of the production. Other mining centres within the area are Sacaramb, Almaș (Neagris), Roșia Montana, Bucium and Stanija.

The gold-bearing veins of the Apuseni district strike in directions between north-west and north-east and vary from a few millimetres to two metres in width. The lengths of the veins range between 300 and 700 metres and some are worked at depths approaching 600 metres from the surface. The ore is said to average 8 to 12 grammes per ton.

The largest producing company is the Societatea Mica with a production in 1940 of 2,000 kilos, and in 1941 of 2,665 kilos. In 1942 the State gold mines of Roșia Montana and Sacaramb produced respectively 150 and 235 kilos of gold.

Production in the Baia Mare district, now Hungarian, represented about one-third of normal ore output.

316 To stimulate gold production in those mines
435 carrying only small values in gold, and also to make up for the loss of output entailed by the transfer of the Baia Mare area in Northern Transylvania to Hungary under the Vienna Award, the premium on gold production in Rumania was increased from the 1st January, 1943. In addition to the fixed basic price of 211,111 lei per kilo, there is now a premium of 180,180 lei per kilo for ore produced with a gold content of 15 grammes per ton rising to 630,630 lei per kilo for ore with a gold content of 3 grammes per ton or less. This has led to considerable prospecting for new gold deposits in various parts of the country.

K. SILVER

316 Over pre-war years Rumania ranked sixth, or when the Italian production was greatly reduced, seventh

[23 t]

8: Armstrong S-4 (no date) 1951 EF1 Yugoslavia
Rumania CD1

outlined. In the first place it would be slow and costly to carry out. Secondly, it would call for skills which Communist régimes do not possess and foreign scientific information which they boast of despising. Thirdly, they in principle oppose measures for improving small-peasant agriculture, for if they succeeded the peasants would merely become more independent and recalcitrant. They therefore prefer to favor industry and neglect agriculture,[7] calculating that misery on the farms will make the peasants more amenable to collectivization or force them into great slave-labor projects like the Danube-Black Sea canal. In any case, they have not cast Rumania to play an agricultural rôle in the family of Sovietized states. Nature did so, but they are going to improve on nature.

In Stalin's original plans Jugoslavia and probably Bulgaria were destined to remain agricultural in the main and to supply the other members of the family with raw materials. Rumania, although so heavily agricultural, was to be largely industrialized. The reason for this arbitrary allotment of functions is not entirely clear. Rumania has oil and timber, as well as reserves of soft coal and natural gas in Transylvania, all of which can be developed without running counter to economic law. She also has a large reservoir of unskilled labor. But otherwise she is not adapted by natural resources and native skills to proceed with very speedy or very extensive industrialization projects, and she seems especially unsuited to becoming a center of heavy industry in view of the scarcity of her metallurgical reserves. In any case, the improvement and development of agricultural production would be the right preliminary to ambitious enlargements of the industrial plant such as are projected in the new Rumanian Five Year Plan, to end December 31, 1955.

Ana Pauker has called the new Plan "majestic." Its main purpose, she has written,[8] is "the industrialization of the country . . . on a new, advanced technical basis . . . which will insure the success of the Socialist offensive against the capitalist elements." Industrial output is to be increased twofold, with emphasis on what she called "the Stalin method" of developing heavy industry in particular.

[7] Of the Rumanian investment program for 1950, 47 percent was allocated for industry, 20 percent for transportation and 9 percent for agriculture.

[8] *For a Lasting Peace, for a People's Democracy!*, Bucharest, August 18, 1950.